

Appl. No. 10/041,847
Amdt. dated December 7, 2004
Reply to Office Action of September 7, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application;

Listing of Claims

1. (currently amended) An angioplasty catheter, comprising:
an inner tube having a proximal end, a distal end, and a lumen extending therethrough;
an outer tube disposed over the inner tube, the outer tube having a proximal end and a distal end;
a balloon coupled to the distal end of the outer tube;
an inflation lumen defined between the inner tube and the outer tube, the inflation lumen in fluid communication with the balloon; and
a support block coupled to the inner tube, the support block including a plurality of longitudinal fins, wherein at least a portion of the support block extends distal of the distal end of the outer tube.
2. (original) The angioplasty catheter in accordance with claim 1, wherein at least a portion of the support block is disposed within the balloon.
3. (original) The angioplasty catheter in accordance with claim 1, wherein the support block is coupled to the inner tube at a location that is distal of the distal end of the outer tube
4. (original) The angioplasty catheter in accordance with claim 1, wherein the support block includes a distal region having a plurality of distal fins.
5. (original) The angioplasty catheter in accordance with claim 4, wherein the distal fins are collapsible.
6. (original) The angioplasty catheter in accordance with claim 4, wherein the distal region is tapered.

Appl. No. 10/041,847

Amdt. dated December 7, 2004

Reply to Office Action of September 7, 2004

7. (original) The angioplasty catheter in accordance with claim 4, wherein the support block further comprises a proximal region.

8. (original) The angioplasty catheter in accordance with claim 7, wherein at least a portion of the proximal region extends into the inflation lumen.

9. (original) The angioplasty catheter in accordance with claim 7, wherein the proximal region includes a plurality of proximal fins.

10. (original) The angioplasty catheter in accordance with claim 9, wherein the proximal fins are collapsible.

11. (original) The angioplasty catheter in accordance with claim 7, wherein the support block further comprises an abutment surface that may abut against the distal end of the outer tube.

12. (original) The angioplasty catheter in accordance with claim 1, wherein the support block is coupled to the inner tube by injection molding.

13. (original) The angioplasty catheter in accordance with claim 1, wherein the support block is comprised of heat shrinkable material and wherein the support block is coupled to the inner tube by heat shrinking.

14. (original) The angioplasty catheter in accordance with claim 1, wherein the support block is coupled to the inner tube by adhesive.

15. (original) The angioplasty catheter in accordance with claim 1, wherein the support block is coupled to the inner tube by laser bonding.

Appl. No. 10/041,847
Amdt. dated December 7, 2004
Reply to Office Action of September 7, 2004

16. (original) The angioplasty catheter in accordance with claim 1, further comprising a marker band.

17. (original) The angioplasty catheter in accordance with claim 16, wherein the support block prevents the marker band from substantially occluding the inflation lumen.

18. (original) The angioplasty catheter in accordance with claim 1, wherein the support block substantially prevents occlusion of the inflation lumen during coupling of the balloon to the outer tube.

19. (currently amended) An angioplasty catheter, comprising:
an inner tube having a proximal end, a distal end, and a lumen extending therethrough;
an outer tube disposed over the inner tube, the outer tube having a proximal end and a distal end;
a balloon coupled to the distal end of the outer tube;
an inflation lumen defined between the inner tube and the outer tube, the inflation lumen in fluid communication with the balloon; and
a support block coupled to the inner tube distal of the distal end of the outer tube,
the support block including a tapered distal region having a plurality of distal longitudinal fins and a proximal region having a plurality of proximal longitudinal fins, and
wherein at least a portion of the distal region is disposed within the balloon and at least a portion of the proximal region is disposed within the inflation lumen.

20. (original) The angioplasty catheter in accordance with claim 19, wherein the distal fins are collapsible.

21. (original) The angioplasty catheter in accordance with claim 19, wherein the proximal fins are collapsible.

Appl. No. 10/041,847

Amtd. dated December 7, 2004

Reply to Office Action of September 7, 2004

22. (original) The angioplasty catheter in accordance with claim 19, wherein the support block further comprises an abutment surface that may abut against the distal end of the outer tube.

23. (original) The angioplasty catheter in accordance with claim 19, wherein the support block is coupled to the inner tube by injection molding.

24. (original) The angioplasty catheter in accordance with claim 19, wherein the support block is comprised of heat shrinkable material and wherein the support block is coupled to the inner tube by heat shrinking.

25. (original) The angioplasty catheter in accordance with claim 19, wherein the support block is coupled to the inner tube by adhesive.

26. (original) The angioplasty catheter in accordance with claim 19, wherein the support block is coupled to the inner tube by laser bonding.

27. (original) The angioplasty catheter in accordance with claim 19, further comprising a marker band.

28. (original) The angioplasty catheter in accordance with claim 27, wherein the support block prevents the marker band from substantially occluding the inflation lumen.

29. (original) The angioplasty catheter in accordance with claim 19, wherein the support block substantially prevents occlusion of the inflation lumen during coupling of the balloon to the outer tube.

30. (currently amended) A method of manufacturing an intravascular angioplasty catheter, comprising the steps of:

Appl. No. 10/041,847

Amdt. dated December 7, 2004

Reply to Office Action of September 7, 2004

providing an inner tube having a proximal end, a distal end, and a lumen extending therethrough;

coupling a support block to the inner tube, the support block having a plurality of longitudinal fins;

disposing an outer tube over the inner tube, the outer tube having a distal end, at least a portion of the support block extending distal of the distal end of the outer tube, wherein an inflation lumen is defined between the inner tube and the outer tube; and

coupling a balloon to the distal end of the outer tube.

31. (original) The method in accordance with claim 30, wherein the step of coupling a support block to the inner tube includes injection molding the support block to the inner tube.

32. (original) The method in accordance with claim 30, wherein the step of coupling a support block to the inner tube includes securing the support block to the inner tube with an adhesive.

33. (original) The method in accordance with claim 30, wherein the step of coupling a support block to the inner tube includes laser bonding the support block to the inner tube.

34. (original) The method in accordance with claim 30, wherein the support block is comprised of heat shrinkable material and wherein the step of coupling a support block to the inner tube includes heat shrinking the support block onto the inner tube.

35. (original) The method in accordance with claim 30, further comprising the step of disposing a proximal region of the support block into the inflation lumen.

36. (original) The method in accordance with claim 35, wherein the proximal region of the support block substantially prevents occlusion of the inflation lumen during the step of coupling the balloon to the outer tube.

Appl. No. 10/041,847

Amdt. dated December 7, 2004

Reply to Office Action of September 7, 2004

37. (original) The method in accordance with claim 30, further comprising the step of coupling a marker band to the inner tube.

38. (original) The method in accordance with claim 37, wherein the support block substantially prevents the occlusion of the inflation lumen during the step of coupling the marker band to the inner tube.